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# PUBLIC HEALTH REPORTS

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## BERIBERI.<sup>1</sup>

### A REPORT ON BERIBERI IN THE COUNTY JAIL AT ELIZABETH, N. J.

By HERMAN B. PARKER, Passed Assistant Surgeon, United States Public Health Service.

I was detailed to proceed to Elizabeth, N. J., to investigate the character of several cases of sickness, supposed to be beriberi, that were appearing in the county jail of that place. I arrived at Elizabeth, N. J., November 6, 1913, and with Dr. Livingood, the jail physician, proceeded to the hospital where three of the cases were confined. These cases were examined and found to be beriberi. One of the cases was well on the road toward recovery, but the other two were in the active stage of the disease. From the hospital we went to the jail, where I saw three more cases.

*Case 1.*—H. S. Colored. Admitted to the jail, May 17, 1913; developed beriberi August 22, 1913, 44 days after admission. Admitted to hospital with edema of entire body, dyspnea, anemia, heart enlarged with mitral regurgitation. Examination of the case showed marked atrophy of the muscles of the legs, knee jerks absent. Pressure over posterior tibial muscles showed very marked tenderness; no areas of anesthesia could be demonstrated. Examination of the heart showed physical signs of dilatation.

*Case 2.*—G. O. Italian. Admitted to jail April 28, 1913; developed the disease September 27, 1913, 152 days after admission. He was admitted to the hospital on account of edema of legs. His heart was enlarged, gums were swollen, and he had nose bleed. Examination showed marked atrophy of both legs, extreme tenderness on pressure over calves, absent knee jerks, heart dilated with pseudo mitral murmur. No areas of anesthesia could be demonstrated.

*Case 3.*—F. T. Polak. Admitted to jail June 9, 1913; developed the disease September 9, 1913, 92 days after admission. Admitted to hospital with edema of entire body, albuminuria, heart enlarged, dyspnea, anemia, and anorexia. Examination showed this case to be well toward recovery. The knee jerks had returned; there was some pain on pressure over the calf muscles and some atrophy. This case showed well-marked areas of anesthesia along the peroneal aspect of the tibia, being the only one of the three hospital cases in which this phenomenon could be demonstrated. The heart of this patient was about normal.

Of the three cases I saw in the jail one was practically recovered; the only remaining symptom being decreased patellar reflex of the left leg. Of the other two cases, one—an Italian—presented typical symptoms of the paralytic form of the disease, dilated heart, absence

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<sup>1</sup> Submitted Nov. 19, 1913.

of patellar reflexes, areas of anesthesia over peroneal side of both legs, atrophy of muscles, and pain on pressure over nerves. The other prisoner had not come under medical observation but was examined on account of being the only remaining prisoner confined more than 60 days. In this case I found well-marked areas of anesthesia over peroneal muscles and tibia, pain on pressure, a moderate grade of anemia, and a beginning edema of the left leg. This case was early in the disease and presented one symptom not often observed; that is, exaggerated patellar reflexes.

These six comprised all the prisoners serving a sentence of 60 days or more. The short-term prisoners were not examined for early lesions.

In the last three years, during which time Dr. Livingood has been jail physician, 22 cases of jail edema have been tabulated by him, as follows:

Name.	Date committed.	Date of development of symptoms.	Time confined before development of symptoms.	Total number of days served.	Date of discharge.
			<i>Days.</i>		
1. M. M. ....	June 23, 1910	Sept. 28, 1910; to hospital Oct. 20, 1910; returned Nov. 30, 1910.	95	194	Feb. 15, 1911.
2. J. C. ....	Mar. 14, 1911	May 28, 1911; hospital June 6, 1911.	75	84	June 6, 1911.
3. M. L. ....	June 14, 1911	Aug. 8, 1911.....	55	57	Aug. 10, 1911.
4. I. K. ....	June 5, 1911	....do.....	64	79	Aug. 23, 1911.
5. G. N. ....	May 27, 1913	Aug. 13, 1913.....	78	81	Aug. 16, 1913.
6. H. S. ....	May 6, 1911	Oct. 17, 1911.....	164	181	Nov. 7, 1911.
7. J. Di G. ....	July 12, 1911	Nov. 15, 1911.....	126	355	July 2, 1912.
8. G. F. ....	Mar. 1, 1911	To hospital May 11, 1911.	71	76	May 18, 1911.
9. J. F. ....	Dec. 28, 1911	To hospital Mar. 11, 1912.	73	78	Mar. 12, 1912.
10. J. D. ....	June 30, 1912	Sept. 26, 1912.....	88	107	Oct. 29, 1912.
11. W. McC. ....	Nov. 7, 1912	Feb. 1, 1913.....	86	161	Apr. 11, 1913.
12. C. P. ....	Mar. 22, 1913	July 21, 1913.....	121	129	July 29, 1913.
13. G. H. ....	July 9, 1913	Aug. 22, 1913.....	44	44	Aug. 22, 1913.
14. H. S. ....	May 17, 1913	To hospital Aug. 22, 1913.	97	115	Sept. 9, 1913.
15. A. P. ....	Apr. 14, 1913	Sept. 9, 1913.....	148	173	Oct. 4, 1913.
16. F. T. ....	June 9, 1913	To hospital Sept. 9, 1913.	92	113	Sept. 30, 1913.
17. G. O. ....	Apr. 28, 1913	Sept. 27, 1913.....	152	185	
18. R. G. ....	Mar. 24, 1913	June 6, 1913.....	74	81	June 13, 1913.
	July 8, 1913	Oct. 3, 1913.....	87	93	Oct. 9, 1913.
19. T. F. ....	Mar. 6, 1913	June 11, 1913.....	97	113	June 27, 1913.
20. G. H. ....	June 6, 1913	Sept. 25, 1913.....	111	115	To Mainfield Sept. 29, 1913.
21. G. N. ....	May 27, 1913	Aug. 13, 1913.....	78	81	Aug. 16, 1913.
22. T. S. ....	June 13, 1913	.....	.....	.....	To hospital Aug. 7, 1913.

These cases are now recognized as beriberi. There is a history, however, of the disease having occurred periodically during the last 10 or 15 years.

This is a county jail and prisoners are confined here only while awaiting trial or serving a sentence of one year or less. Dr. Livingood informs me that at least 80 per cent of all prisoners serving more than 90 days contract the disease.

The fact that the disease existed so long without recognition in one locality leads to the supposition that it probably exists under similar circumstances in other localities. An inspection of several penal institutions would give data sufficient to determine this.

### RELATIVE EFFICIENCY OF RAT TRAPS.<sup>1</sup>

#### TYPE OF TRAP WHICH HAS PROVED MOST EFFECTIVE IN MANILA.

By VICTOR G. HEISER, Surgeon, United States Public Health Service, Chief Quarantine Officer and Director of Health for the Philippine Islands.

With a view to ascertaining which type of rat trap was most effective and also the average number of rats that are caught by a given number of poisoned baits that are set out, statistics were kept during the antirrat campaign in Manila. The ratio maintained in catching rats with two types of traps is indicated in the following table, a perusal of which will show that for the three months ended June 30, 1913, there were 120,565 spring or snap traps set and that for every 100 of this type of trap set there were caught 6.9 rats. During the same period there were 47,075 wire cage traps set; the total number of rats caught was 339; which gives 0.72 rats caught for each hundred traps set. For the quarter ended September 30, 130,627 spring or snap traps were set and 9,753 rats were caught, which gives 7.47 for each 100 traps set. During this period 40,621 wire cage traps were set and 395 rats were caught, which gives 0.97 rats caught for each 100 wire cage traps set.

Kind of trap or poison.	Quarter ended June 30.			Quarter ended Sept. 30.		
	Number set.	Number of rats caught or poisoned.	Per cent.	Number set.	Number of rats caught or poisoned.	Per cent.
Spring or snap traps.....	120,565	8,377	6.9	130,627	7,753	7.47
Wire-cage traps.....	47,075	339	.72	40,621	395	.97
Poison bacon, rice, or coconuts.....	166,237	1,216	.731	177,309	216	.12

  

	Quarter ended—	
	June 30.	Sept. 30.
Number of rats—		
Caught by dogs.....	160	5
Killed with clubs and other weapons.....	2,889	3,813
Found dead from other causes.....	316	297

No accurate record was kept of the number of each kind of rat bait set. Only the total of all was recorded. Bacon, or coconut with strichnine and rice with arsenic were used. For instance, for the

<sup>1</sup> Submitted Nov. 28, 1913.